

REMARKS

In the above-identified Office Action, the Examiner has objected to Claim 4 as being an improper form. Applicant has amended Claim 4 so that it now is acceptable.

Claims 1-6 have been rejected as unpatentable over the Japanese patent abstract by Umeki. The Examiner has stated that the difference between the subject application and Umeki is that Umeki does not teach a plurality of collars. Applicant does not understand this comment because Applicant does not claim a plurality of collars in Claim 1. However, in an effort to further distinguish over Umeki, Applicant has amended Claim 1 so that it now recites that the wire is exposed to the melt. Umeki's wire is not exposed to the melt and, thus, does not experience the problems described below.

When pulling up a single crystal in a CZ method, there are two methods of choice:

- a) rolling up a wire rope, or
- b) sliding a shaft.

The subject invention employs the method (a). In this method (a), a seed holder is provided at a lower edge portion of the wire rope so as to connect a seed crystal and the wire rope, and then the seed crystal is immersed into a silicon melt and pulled up with the growth of a crystal.

Thus, when the seed crystal is located in the vicinity of the silicon melt, the temperature of the edge portion of the wire becomes about 1000°C, and the mechanical strength of the wire rope decreases because of oxidation of the wire rope.

On the other hand, the invention of Umeki is made on the basis of method (b). In this method (b), a seed holder supporting a seed crystal is fixed to a force bar, and the crystal is pulled up by the sliding force bar.

Accordingly, if the pulled crystal is a greater size than anticipated, the height of the pulling up device is too high.

In order to avoid this problem, Umeki employs a wire rope for configuring a part of the force bar, so that the transferring distance of the force bar can be compensated for by the wire rope as much as the length of the wire rope. Thus, Umeki provides an area for slack to develop in the wire, should the crystal size require more height in the pull apparatus, Umeki is not trying to protect the wire from heat.

Further, Umeki does not expose his wire to the melt, as now recited in Claim 1. As a result Umeki does not have the problem that is present in Applicant's invention(i.e. oxidation of the wire) and, therefore, has no motivation to apply Umeki's structure to solve Applicant's problem.

Applicant hereby requests reconsideration and reexamination thereof.

With the above amendments and remarks, this application is considered ready for allowance and applicant earnestly solicits an early notice of same. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, she is respectfully requested to call the undersigned at the below listed number,

Respectfully submitted,



Dated: April 7, 2008

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